

H.A

Notice of Allowability

Application No.

10/741,491

Examiner

William C. Choi

Applicant(s)

GREYWALL ET AL.

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 6/3/2005.
2. ☒ The allowed claim(s) is/are 1,3-16,18-26,28,30,31 and 33.
3. ☒ The drawings filed on 12/19/2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

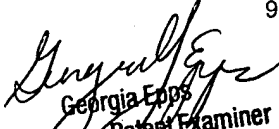
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Georgia Epps
Supervisory Patent Examiner
Technology Center 2800

Allowed Claims: 1, 3-16, 18-26, 28, 30, 31, 33.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103.

Specifically, with respect to independent claims 1 and 16, none of the prior art alone or in combination disclose or teach of a MEMS device and deformation method as claimed, specifically wherein, when a voltage differential is applied between first and second electrodes mounted on a deformable plate, the electrodes move with respect to each other thereby generating the deformation force.

Specifically, with respect to independent claim 24, none of the prior art alone or in combination disclose or teach of a MEMS device comprising a deformation actuator mounted on a deformable plate movably connected to a substrate as claimed, specifically wherein, when the plate adopts a shape and moves with respect to the substrate without a change of the adopted shape, the actuator moves together with the plate without a change in the deformation force applied to the plate by said deformation actuator.

Specifically, with respect to independent claim 26, none of the prior art alone or in combination disclose or teach of a MEMS device comprising a deformable plate, means for moving the plate with respect to a substrate and means for deforming said plate mounted on said plate as claimed, specifically wherein, when the plate adopts a

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shape and moves with respect to the substrate without a change of the adopted shape, the means for deforming the plate moves together with the plate without a change in the deformation force applied to the plate by said means for deforming.

Specifically, with respect to independent claims 28 and 31, none of the prior art alone or in combination disclose or teach of a MEMS device and a method of deforming a plate in a MEMS device comprising a first actuator mounted on a deformable plate to apply a deformation force to change the shape of the plate as claimed, specifically further comprising a second actuator comprising a first electrode attached to the plate and a second electrode mounted on the substrate, wherein, when a voltage differential is applied between the first and second electrodes, the first electrode moves with respect to the second electrode thereby rotating the plate.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Choi whose telephone number is (571) 272-2324. The examiner can normally be reached on Monday-Friday from about 9:00 am to 6 pm.

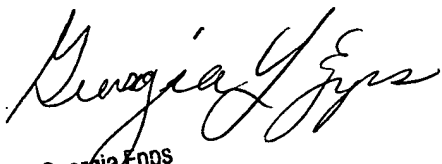
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

W.C.

William Choi
Patent Examiner
Art Unit 2873
July 13, 2005


Georgia Epps
Supervisory Patent Examiner
Technology Center 2800